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ABSTRACT

The purpose of this study was to describe the time-in versus time-out behaviors of successful classroom teachers during reading instruction. Twenty-four primary teachers whose students had averaged 1.27 academic years of growth in reading per eight months instruction were selected. Each teacher was observed and her behaviors recorded on the Time Schedule, a one-factor category observation guide. The number of intervals coded as time-in behaviors (behaviors related to the reading task at hand) ranged from 74 to 100 percent with a mean of 88 percent. The total percent of teacher-dominated behaviors ranged from 12 to 45 percent with a mean of 34.5 percent. These results were compared with those obtained in an earlier study by Porcher who found a significant correlation ($p < .01$) between teachers' time-in behaviors and their students' reading gains. (Author)

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# TIME-USE: A VARIABLE IN TEACHER EFFECTIVENESS

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Time-use as a variable affecting pupil achievement in reading has received little attention by researchers. Harris and Serwer (1966), as part of the CRAFT project, found that the total amount of time devoted to reading activities and pupil achievement gains correlated significantly for all methods studied. Ramsey (1969), describing a massive study conducted by the Kentucky State Department of Education, reported that time spent in reading instruction did correlate positively, although not significantly, with reading achievement gains. Silberman (1957), however, found no correlation between the amount of time spent on reading and student reading achievement. Certainly the limited research available on the relationship between time spent on reading and student achievement in

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reading neither proves nor disproves that time is a significant variable in student reading achievement.

If one accepts the old adage that "quality rather than quantity" makes the difference, perhaps the more important question is what proportion of the instructional time allotted for reading instruction is actually spent on reading activities. Cobb (1972) and Samuels and Turnure (1974) seemed to accept this thesis in their studies of the relationship of attending behaviors of students and their academic achievement. In both studies higher incidences of attending behavior by students were associated with higher achievement gains.

Approaching the question from the other side, Porcher (1974) trained observers to record the time-in and time-out behaviors of 19 primary teachers. Time-in behaviors were defined as those behaviors by the teacher which were directly related to the reading task at hand. Porcher found a highly significant ($p < .01$) correlation between teachers' time-in behavior and their pupils' reading achievement.

In order for studies on time-use to be meaningful, some standards for high and low levels of time-in behaviors must be set. A logical first step in accomplishing this is to describe the time-in behaviors of successful classroom teachers. Many writers (Ackerman, 1954; Biddle, 1964; Medley and Mitzel, 1963; Honigan, 1967; and Farr, 1969) have advocated the use of systematic, objective observation instruments for describing and analyzing teacher behaviors in the classroom.

## PURPOSE OF THE STUDY

The purpose of this study was to describe, through the use of a systematic observation instrument, the time-in versus time-out behaviors of successful primary classroom teachers of reading.

## METHOD

### Subjects:

The subjects for this study were 24 primary teachers who were selected on the basis of the previous reading achievement gains of students in their classes. Individual student and class achievement goals in reading for the previous three years were obtained from records on file in the administrative unit involved. Teachers were selected whose students had over the past three years averaged 1.27 academic years growth in reading per eight months instruction. The teachers were located in eight schools within one administrative unit.

### Instrument:

The Time Schedule is an adaptation by Porcher of an observation scale developed originally by Aaron (1974). It is designed to aid the observer in recording time-in and time-out behaviors of teachers during reading instruction. It consists of eight major categories of time-in behaviors and 12 categories of time-out behaviors. Behaviors are recorded by an observer at 10-second intervals. According to Rosenshine's (1970) clarification of observation instruments, the Time Schedule could be classified as a one-factor category system. It requires low inference by the observer and calls for frequency counts only (See Table A).

### Procedure:

Each teacher was observed by one investigator for a total of one hour. Twenty minutes of the observation was coded on the Time Schedule. Follow-up conferences were held with each teacher to discuss classroom practices. None of the teachers were aware that time-use was an element of their teaching that was being observed. They were also unaware that the observer was

coding on the Time Schedule although they had been told that the observer would be writing during the observation.

Mean percents and standard deviations were calculated for total time-in behaviors, total time-out behaviors, and subcategories of each.

## RESULTS

Time-in behaviors are those directly related to the reading instructional task at hand. The number of intervals coded as time-in behaviors ranged from 74 to 100 percent with a mean of 88 percent. The standard deviation was 8 percent. These results are more meaningful when compared with Porcher's earlier study using the same instrument. Porcher, as noted above, observed primary teachers whose students varied greatly in reading achievement gains. She found that the total time-in behaviors for those teachers ranged from 57 to 96 percent. The mean for time-in behavior was 83 percent. Because Porcher found a significant correlation between the teachers' time-in behavior and their students' reading gains, it can be assumed that the more successful teachers demonstrated higher rates of time-in behaviors which would be comparable with those described in the present study.

Further analysis of the data indicated that during time-in behavior, 34.5 percent of the intervals were coded as teacher talks, teacher questions, or teacher corrects. The total percent of intervals recorded as teacher-dominated behaviors ranged from 12 to 45 percent with a standard deviation of 14.7. All other time-in behaviors, 65.5 percent, were coded as student talks, student answers, or some category of student participation. Although student participation in the form of comments and questions outnumbered teacher comments almost 2 to 1, it is impossible to make statements

regarding direct or indirect teacher control since the Time Schedule does not allow the observer to differentiate between teacher and student initiated responses.

Time-out behaviors are those behaviors by the teacher that are not directly related to the reading task at hand. The largest single category of off-task behaviors was miscellaneous. This category included all off-task behaviors for which there was no specific title on the Time Schedule. Some of the behaviors coded under miscellaneous included: student movement during group changes, teacher handing out materials, and teacher helping students in other groups. Twenty-eight percent of all off-task behaviors were in this category. Other off-task categories that were somewhat large included: teacher finding place or material (16.8 percent), pupil finding place or material (11.3 percent), and no attention to subject by teacher (18.2 percent). No incidents of a teacher severely correcting students or students engaging in non-relative busy work were observed.

## DISCUSSION

The authors acknowledge the limitations of the study. The sample was small; only one observation was made of each teacher by a single observer. There are, however, some powerful implications to be drawn from the study, even in light of the limitations. Based on the results of this study and the results reported by Porcher, time-use appears to be an important factor in teacher effectiveness. The teachers in this study, all of whom had consistently produced high student achievement, demonstrated rates of time-in behavior that were comparable to the rates reported for the more successful teachers in Porcher's study. It should be reiterated that Porcher found time-in behavior of teachers and student achievement to be significantly correlated.

Although the results of this study alone do not clearly establish standards of high and low levels of time-in use, they do provide baseline data against which to compare the results of other studies.

The Time Schedule seems to be a valid instrument for describing the time-in and time-out behaviors of teachers in a classroom setting. The use of the Time Schedule provides for the assessment of one aspect of teaching effectiveness. It also provides teachers with objective feedback for improving classroom efficiency.

## Time Schedule

Teacher_____ Group Description_____
Observer_____ Time Start_____
Date_____ Time Stop_____

1. COMPREHENSION

| T. Talks | T. Questions | T. Corrects | P. Answers | Teacher Supervised Pupil Behaviors: P. Talks or Questions | P. Reads or Answers Ques. | Workbook or Supp. Mtls. |
|---|---|---|---|---|---|---|
| | | | | | | |

2. SIGHT VOCABULARY

| T. Talks | T. Questions | T. Corrects | P. Answers | P. Talks or Questions | Peers Correct | Workbook or Supp. Mtls. |
|---|---|---|---|---|---|---|
| | | | | | | |

3. ORAL READING

| T. Talks | T. Questions | T. Corrects | P. Reads | P. Talks or Questions | P. Corrects | P. Analyses Word or Prase |
|---|---|---|---|---|---|---|
| | | | | | | |

4. PHONICS

| T. Talks | T. Questions | T. Corrects | P. Answers | P. Talks or Questions | Workbook or Supp. Mtls. | |
|---|---|---|---|---|---|---|
| | | | | | | |

5. WORD STUDY

| T. Talks | T. Questions | T. Corrects | P. Answers | P. Talks or Questions | Workbook or Supp. Mtls. | |
|---|---|---|---|---|---|---|
| | | | | | | |

6. TIME OUT

| T. Silent-Waits Quiet | T. Finding Place or Material | P. Finding Place or Material | T. Awaits Answer | No Attention to Pupils by Teacher | No Attention to Subject by Teacher | Student off Topic |
|---|---|---|---|---|---|---|
| | | | | | | |

7. TIME OUT

| Rules Broken-T. Corrects Behavior | T. Severely Corrects Pupil | T. Gives Directions 2, 3 Times | P. Not Working Correctly | Busy Work Not Relative | Outside Interruption | |
|---|---|---|---|---|---|---|
| | | | | | | |

1 = 10 Seconds

Definitions of Categories on the Time Schedule

T. Talks: Teacher talks about or explains content to pupil(s).

T. Questions: Teacher asks a question about content with the intent that a pupil answer.

T. Corrects: Teacher corrects a wrong assumption made about content by the pupil(s).

Pupil Answers: Pupil responds to a question about content.

P. Questions: Pupil asks question or request information about content or procedure being considered.

P. Reads: Pupil reads orally for teacher.

Peers Correct: Classmates correct a mistake made by pupil.

Workbook or Supplementary Material: Pupils working in workbooks or other related material with teacher supervision.

T. Silent-Awaits Quiet: Teacher attempts to (re)gain attention of pupils by remaining silent for at least 10 seconds.

T. Finding Place or Material: Teacher attention is diverted from task at hand by loss of place or needed materials. (unable to locate book, page number, etc.)

P. Finding Place or Material: Pupil attention diverted from task at hand by loss of place or needed materials.

T. Awaits Answer: T. awaits to answer to a direct question for 10 seconds.

Busy Work-Not Relative: Pupils engaged in activities not related to lesson.

No Attention to Pupils by Teacher: Teacher engaged in activities unrelated to lesson. (reading paper, visiting with other teachers, etc.)

No Attention to Subject by Teacher: Teacher talks to pupils about unrelated subjects.

T. Rules Broken, Corrects Behavior: Teacher tells pupil that his behavior is inappropriate or incorrect.

T. Severely Corrects Pupil: Teacher ridicules or degrades pupil for inappropriate or incorrect behavior.

Outside Interruption: An interruption from outside the classroom causing a loss of reading time.

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